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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/159,817 09/23/98 WESEL

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020991  
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WM02/1023

EXAMINER

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Paper No. 12

Application Number: 09/159,817  
Filing Date: September 23, 1998  
Appellant(s): WESEL, ELLEN K.

Vijayalakshmi D. Duraiswamy  
For Appellant

**EXAMINER'S ANSWER**

This is in response to appellant's brief on appeal filed August 16, 2001.

**(1) *Real Party in Interest***

A statement identifying the real party in interest is contained in the brief is correct.

**(2) *Related Appeals and Interferences***

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief is correct.

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**(3) Status of Claims**

The statement of the status of the claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Invention**

The summary of invention contained in the brief is correct.

**(6) Issues**

The appellant's statement of the issues in the brief is substantially correct. The changes are as follows: Appellant admits that claims 7 and 8 are not being rejected as being anticipated by the Rouffett reference and rejected unpatentable over Rouffett in view of Diekelman, see page 5 lines 16-18. Hence, claims 9 and 10 depend on claim 8, claims 9 and 10 should be treated as rejected unpatentable over Rouffett in view of Diekelman.

**(7) Grouping of Claims**

Appellant's brief includes a statement that claims do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

**(8) Claims Appealed**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(9) Prior Art of Record**

5,410,731	Rouffett et al	4-1995
6,002,916	Lynch	2-1998
5,612,701	Diekelman	3-1997

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**(10) *Grounds of Rejection***

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1 and 5-6 are rejected under 35 USC 103(b) as being anticipated by Rouffet et al (us 5,410, 731).

As to claim 1, Rouffet et al disclose a satellite system operating over a land mass (the invention provides a geostationary repeater satellite telecommunication facility, see col. 2 lines 12-13 and fig.1) comprising:

Rouffet et al disclose a first satellite (S1) generating a first plurality of spot beams (F1 and F2) directed at said land mass (T1 and T2), said first set of spot beams partially covering said land mass, see fig. 1.

Rouffet et al disclose a second satellite (S2) generating a second plurality of spot beams (F'1 and F'2) in combination provide substantially ubiquitous coverage over the landmass,( capable of covering at least two earth coverage areas T1,T2 each of which intended to receive determined transmission channels, see col. 2 lines 15-18 and fig.1).

As to claims 5, Rouffet et al disclose the first plurality spot beams comprise a plurality of reconfigurable spot beams (all configurations are naturally possible, provided that the redundancy conditions desired by users are ultimately satisfied, see col. 4 lines 66-68).

As to claim 6, Rouffet et al disclose the plurality of reconfigurable spot beams comprises a first beam (f1) directed at a first area (T1) and a second spot beam (f'1) directed substantially to said first area (T1), see fig.1.

Claims 2-4 are rejected under 35 USC 103(a) as being unpatentable over Rouffet et al (us 5,410,731) in view of Lynch (us 6,002,916).

As to claim 2, Rouffet et al disclose the first satellite (S1) and said second satellite (s2) (see fig. 1). Rouffet et al, however, fail to disclose these satellites selected from the group consisting of a MEO, GEO and an IGSO. Lynch discloses server satellite may also be placed in a MEO, GEO or in any combination of GEO, MEO or LEO, see 5 lines 24-28. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the satellite system of Rouffet with teaching of Lynch so that the satellites are selected from the group of MEO, GEO depending on the need of service the satellite is useful.

As to claims 3 and 4, Rouffet et al fail to disclose the spot beams are V band and K band. However, Lynch discloses the server satellite 10 may include an RF communications cross link 12b, with K-band communications cross link antennas being preferred, see col. 6 lines 42-47. Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify the spot beams V-band and K-band of Rouffet with the teaching of Lynch satellite with K-band communication cross link antennas, in order to prevent access or jamming or backing of sensitive satellite communications.

Claims 7-10 are rejected under 35 USC 103(a) as being unpatentable Rouffet et al (5,410,731) in view of Diekelman (us 5,612,701).

As to claim 7, Rouffet et al fail to disclose at least one of said first plurality of spot beams having a plurality of beam segment portions. However, Diekelman discloses spot beams (72 and 73) having a plurality of beam segment portions (spot beam 72 has been segmented (divided) in four segments, see fig.6). Therefore, it would have been obvious to one of ordinary skill in the

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art at the time invention was made to modify the spot of beams of Rouffet, with teaching of Diekelman so that the service capacity be managed based on the number of users in the segmented portion of area.

As to claim 8, Rouffet et al fail to disclose at least one of said first plurality of spot beams having a plurality of beam segment portions being independently adjustable in response to a condition . However, Diekelman discloses satellite beam moves from circle 73 to 72 in response to the user's demand as the result of the movement of CU 80 from Cu 81 position, see col. 5 lines 11-28. Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Rouffet in repositioning the beam segment of landmass, with teaching of Diekelman, so that the new location of the cellular unit would be covered by the satellite beam coverage.

As to claims 9 and 10, Rouffet et al disclose the condition is rain and heavy traffic routed through said satellite ( if one of the satellites S1 or S2 fails, the other satellite S2 or S1 continues to beam to both of area T1 and T2 until the satellite is repaired or until a replacement satellite is launched, see col. 3 lines 48-51) . The communication failure often occurs due to heavy traffic load and environmental disaster on the ground.

For the above reasons, it is believed that the rejections should be sustained.

**(11) Response to Argument**

A response to the arguments concerning the art rejections of claims 1, 5-6 and 9-10 follows.

On page 3, fourth paragraph of the brief, appellant argued that the rejection of independent claim 1 anticipates Rouffet that the Rouffet reference teaches a satellite system used

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for direct television broadcasting and a system that directs a first beam for primary coverage and second beam coverage of a separate area that is covered by primary beam of another satellite.

The examiner disagrees. Appellant claim is so broadly recites that the satellite system in general. Hence, Rouffet et al anticipate that Rouffet et al teach a geostationary repeater satellite telecommunications facility . in particular a direct television broadcasting facility capable of covering a plurality of coverage areas, see col. 2 lines 12-17. Rouffet et al teach both satellites generate plurality of beams to cover the same land mass i.e., S1 generates beam F1 to cover T1 and S2 generates beam F'1 to cover landmass T1, as clearly show by fig. 1.

Appellant argued that Rouffet fails to teach or suggest a first plurality of spot beams providing partial coverage over a landmass.

The examiner disagrees. In fact, Rouffet et al teach a satellite telecommunications system covering two different earth coverage areas --- a first type requiring, on each of two communication satellites, one medium-power amplifier (A1 or A2,---A12) per transmission channel; and second type requires --- one higher-power amplifier having approximately twice as much as said medium power amplifier, see claim 1 of Rouffet. Hence, Rouffet et al teach the channels with medium power amplifier , which leads to channels with low amplification power provides partial coverage over a landmass.

Appellant argued that a second plurality of spot beams that together provide ubiquitous coverage over the land mass, page 4.

The examiner disagrees. The appellant's claim recites different from appellant's argument, claim 1 states that "provide substantially ubiquitous coverage over the land mass."

Besides, Rouffet et al teach that capable of covering at least two earth coverage areas T1 and T2, see col.2 lines 14-15, which reads on substantially ubiquitous (seeming to be everywhere at the same time<sup>1</sup>) of appellant subject matter. Therefore, Rouffet et al anticipates appellant's claim.

On page 5, third paragraph, appellant argued that Rouffet does not teach the beam portions are independently adjustable in response to a condition, such as rain and heavy traffic.

The examiner disagrees. In fact, Rouffet et al teach if one of the satellites S1 or S2 fails, the other satellite S2 or S1 continues to beam to both of area T1 and T2 until the satellite is repaired or until a replacement satellite is launched, see col. 3 lines 48-51. A communication failure would be occur due to condition on the ground such as bad weather or traffic overload , therefore, the system adjusts it beam portions in response to failure of one of the satellite to cover the landmass.

On page 7, first paragraph, appellant argued that Diekelman does not have beam segments may be individually reconfigurable.

However, the examiner disagrees. Diekelman discloses a satellite beam moves from circle 73 to 72 in response to the user's demand as the result of the movement of CU 80 from Cu 81 position, and the service area within the circle 72 is divided into segments see col. 5 lines 11-28 and fig.6.

For the above reasons, it is believed that the rejections should be sustained.

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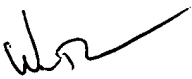


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Respectfully submitted,

October, 19, 2001.

  
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SUPERVISORY PATENT EXAMINER  
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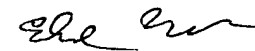
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